R E P O R T R E S U M E S

ED 010 616 08

THE ESTABLISHMENT AND INITIAL OPERATION OF A RESEARCH AND DEVELOPMENT UNIT IN THE DIVISION OF VOCATIONAL EDUCATION, DEPARTMENT OF EDUCATION, STATE OF NEW JERSEY.

BY- WORTHINGTON, ROBERT M.
NEW JERSEY STATE DEPT. OF EDUCATION, TRENTON

REPORT NUMBER BR-5-0110 PUB DATE DEC 66
REPORT NUMBER ERD-314
GRANT OEG-85-40-0000-001
EDRS PRICE MF-$0.09 HC-$0.96 24P.

DESCRIPTORS- *RESEARCH COORDINATING UNITS, *VOCATIONAL EDUCATION, *EDUCATIONAL RESEARCH, *STATE PROGRAMS, *OCCUPATIONAL INFORMATION, EDUCATIONAL NEEDS, DATA PROCESSING, COORDINATION, CURRICULUM PLANNING, EDUCATIONAL FACILITIES, DEMONSTRATION PROGRAMS, TRENTON, NEW JERSEY

THE INITIAL OPERATIONS OF THE NEW JERSEY OCCUPATIONAL RESEARCH AND DEVELOPMENT UNIT, DURING AN 18-MONTH PERIOD, WERE DESCRIBED. THE UNIT USED A VARIETY OF RESEARCH AND DEVELOPMENT TECHNIQUES TO SERVE SUCH STATE AND LOCAL VOCATIONAL EDUCATION NEEDS AS TEACHER EDUCATION AND CERTIFICATION, PROGRAM EVALUATION, PILOT AND DEMONSTRATION PROGRAMS, FACILITY PLANNING, EQUIPMENT SELECTION, AND CURRICULUM DEVELOPMENT. FUNCTIONAL ACTIVITIES OF THE UNIT INCLUDED (1) STIMULATING AND COORDINATING EFFORTS, (2) PARTICIPATING IN THE STUDY AND SOLUTION OF PROBLEMS, AND (3) DISSEMINATING INFORMATION SIGNIFICANT TO VOCATIONAL EDUCATION. (JH)

ED010616

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education
This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated do not necessarily represent official Office of Education position or policy.

ERD-314

FINAL REPORT
Project No. 5-0110
Grant No. OE-85-40-0000-001

THE ESTABLISHMENT AND INITIAL OPERATION OF A RESEARCH AND DEVELOPMENT UNIT IN THE DIVISION OF VOCATIONAL EDUCATION, DEPARTMENT OF EDUCATION, STATE OF NEW JERSEY

June 1965 - December 1966

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

The Establishment and Initial Operation of A Research and Development Unit in the Division of Vocational Education, Department of Education, State of New Jersey

Project No. 5-0110
Grant No. OE-85-40-0000-001

Dr. Robert M. Worthington

June 1965 - December 1966

The research reported herein was performed pursuant to a grant with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

Division of Vocational Education
New Jersey State Department of Education
Trenton, New Jersey

CONTENTS

		Page
I	INTRODUCTION	1
II	METHOD	3
III	RESULTS	9
IV	DISCUSSION	17
V	CONCLUSIONS	18
VI	SUMMARY	19

I INTRODUCTION

The purpose of the grant was to establish a research and development coordinating unit as a part of the Division of Vocational Education of the Department of Education of the State of New Jersey. This unit provided more and better services to education at the State and local level so that the many and rapidly growing unmet needs in vocational education in the State of New Jersey could be effectively met. This unit initiated activities when they were needed and strengthened coordination among existing activities, depending upon the status of the occupational research program in the State.

To meet the needs of New Jersey, a greatly expanded program of occupational research and development is essential. If these problems are to be solved in the State on a broad front, the leadership must evolve from personnel of the Division of Vocational Education of the Department of Education.

The urgent need for expansion of vocational education in New Jersey has been recognized. The spotlight of education was turned towards this objective by New Jersey's Commissioner of Education, Frederick M. Raubinger, when in October, 1963, he announced his intention to instigate a broad study of the needs of vocational education in New Jersey. A blue-ribbon committee was appointed and reported on June 29, 1964. Among the recommendations made were the following:

> A breakthrough is needed so that secondary schools may provide additional vocational programs to the thousands of youth who terminate their education with high school. The breakthrough must be spearheaded by a broader, more inclusive concept of occupational training.
>
> The State Department of Education be adequately staffed and financed in order to render effective leadership to assist local, regional, and county areas in determining their vocational and occupational needs and in carrying out effective programming for development of facilities, personnel, and curriculum construction to satisfy these needs.
>
> The State Department of Education establish a clearing house of information to enhance the status of vocational education by proper recognition of vocational needs of youth and employment needs of business and industry. Information promulgated to be based on continuing statewide research studies of occupational needs and frequent,

> periodic analysis by local and county boards of education and their staffs to determine vocational needs of youth in order that appropriate programs and facilities may be provided, thereby promoting the status of vocation opportunity and employment for youth and industry. 1

The mandate was clear. These concepts have been endorsed by New Jersey's Governor and Commissioner of Education.

A proposal was thus developed to provide additional, specialized and highly competent leadership personnel at the State level in occupational research and development. This leadership was essential to effective vocational education in each local community, school, and program of secondary and post-secondary vocational education in order that a concentrated effort could be made to reduce unemployment and decrease underemployment by providing the educational opportunity for each individual to develop the abilities and talents with which he is endowed. The strategy was an all-out war on unemployability through strengthened, specialized, concentrated, effective state leadership in occupational research and development.

1 Vocational Education for New Jersey Today. (Report of the Committee to Study the Needs of Vocational Education in New Jersey.) Trenton, New Jersey, State Department of Education, 1964, Page IX.

II METHOD

1. Setting

The Occupational Research and Development Unit, centered in the Division of Vocational Education, was designed to develop a cooperative environment encompassing the total concerns of education for the world of work in New Jersey. The internal structure was concerned with action programs within the Division, working inter-departmentally by coordinating programs with the Division of Curriculum and Instruction, School Building Services, Higher Education and Administration, and the provision of needed services to education throughout the State at the local levels. The external structure was concerned with the development of programs that bring interaction with other state and local agencies interested in vocational-technical programs, i.e., Department of Labor and Industry, Employment Security, Poverty Programs, Community Action Projects.

2. Activities

The Occupational Research and Development Unit in the Division of Vocational Education provided the leadership in the State to initiate research that identified the problems, worked toward their solutions and presented the findings to the proper authorities for action. This was accomplished by assigning the unit the responsibility for:

a. Stimulating occupational education research and developmental activities in local school districts, colleges and universities, non-profit organizations and the Department through meetings with these groups to encourage a cooperative effort of attack, utilizing the methods of research on existing identified problems.

b. Coordinating the efforts of the groups within the State as well as those in other states that are seeking individually to work toward a solution of a problem common to all.

c. Making available throughout the State and Nation by means of established communication media and by preparation of special research bulletins, the information that reports the progress and application of current and on-going research projects.

d. Organizing activities which stimulate and result in the improvement of research competencies in the persons working in the field of vocational education. In-service research training including the design of research projects, the training of observers and the construction of measurement instruments to be utilized in project planning seminars.

e. Establishing and maintaining an inventory file and library of occupational research and development projects and resources for use within the State for program needs.

f. Establishing and maintaining a file of survey data on employment opportunities, industrial trends and occupational projections as a basis for planning vocational education programs in terms of curricula, facilities, teacher training, recruitment and placement.

g. Coordinating the research activities that occur within the State between the Department, institutions of higher education, local school districts and private organizations to prevent duplication of efforts and to achieve maximum utilization of the available resources, both human and material.

h. Coordinating curriculum development for teacher preparation between the institutions of higher education providing degree programs to insure the supply of teachers meeting current and future demands in the programs indicated by research.

i. Establishing liaison with the School Building Services Bureau to develop and establish standards for the construction of spaces for vocational-technical education programs.

3. Location

The Occupational Research and Development Unit is housed in the new State Education Building located at 225 West State Street, Trenton, New Jersey, 08625. The State Education Building is the headquarters of the Division of Vocational Education of the Department of Education of the State of New Jersey and all State Educational Services.

4. Organization

The occupational research and development personnel form a Branch in the Division of Vocational Education of the Department of Education. Individuals indicated as divisional support personnel (Directors II or III) derived authority directly from and reported directly to the Director of Occupational Research and Development. The Director of Occupational Research and Development derived authority from and reported directly to the Assistant Commissioner of Education and served as a member of the Divisional Executive Council. The Assistant Commissioner of Education in turn reported directly to the Commissioner of Education. The Commissioner of Education derived authority from and was responsible to the State Board of Education.

5. Evaluation

Evaluation of the effectiveness of the Occupational Research and Development Unit was an on-going process, with periodic reports to and reviews by officials in positions of higher authority.

Personnel holding support positions (Directors II or III) provided the Director of Occupational Research and Development with written progress reports. Staff conferences (weekly or more frequently) provided informal opportunities for evaluation by the Director of Occupational Research and Development.

Personal contact with the clientele served in the field at the local level alerted the Director to the effectiveness of the program and to the work of the support personnel. This also reflected in the growth of services, development of new programs, construction of new facilities, and initiation of developmental and research activities as well as many other expanded service functions as evidenced by statistical comparison.

The Director of Occupational Research and Development made periodic reports to the Assistant Commissioner of Education providing measures of progress of the total unit.

6. Personnel

The functional activities and responsibilities of this unit were the direct responsibility of the Director of Occupational Research and Development. He reported directly to the Assistant Commissioner of Education. Specialists in the unique areas of vocational education constituted the support personnel of this unit. These individuals reported directly to the Director of Occupational Research and Development. Leadership and coordination constituted part of the functions of each individual of the unit. Dissemination of information, and participation in advisory capacities were also part of the responsibilities of each member of the research and development team. Part-time consultants were employed as needed.

7. Staff Positions

Director of Occupational Research and Development
Dr. Ralph LoCascio (9/12/66)
Director of Pilot and Demonstration Programs
Mr. Morton Margules (7/4/66)
Director of Vocational Teacher Education and Certification Research
Dr. Frederic Finsterbach (5/3/65 - ret. 6/21/66)
Mr. Frank Pinkowski (7/7/66)
Director of Vocational Curriculum Research and Instructional Media
Mr. John M. Cummings (7/19/65)
Director of Program Evaluation
Dr. Harold Starr (6/1/66)
Director of Vocational Facilities Planning
Mr. William C. McNeice (7/19/65)

8. Consultants

Dr. James P. Arnold, Ind.	Dr. Jerry Gratz, Pa.
Dr. William C. Bingham, N.J.	Mr. Peter G. Haines, Mich.
Mrs. Katherine Birth, Pa.	Dr. Marvin Hirschfeld, Pa.
Dr. Edward Campbell, Ind.	Dr. Paul Hodgson, Del.
Mr. George Champion, Calif.	Dr. Robert Hoppock, N.Y.
Dr. Norman Chansky, N.C.	Dr. Louis J. Kishkunas, Pa.
Dr. Shriver L. Coover, Pa.	Dr. William Polishook, Pa.
Mrs. Catherine Dennis, N.C.	Mr. M. C. Prollengeier, Mich.
Dr. Lynn Emerson, N.J.	Dr. Alan Robertson, N.Y.
Dr. Gertrude Forrester, N.J.	Mr. Jessie Taft, U.S.O.E.
Mr. Robert Fricker, Ohio	Mr. Robert Worthing, N.J.

POSITION	SPECIFIC ACTIVITIES AND RESPONSIBILITIES
Director of Occupational Research and Development	A staff position of direct line (Director I) Qualifications: An earned doctorate and wide background and experience in research and development encompassing the various vocational education services within the Division of Vocational Education. Experience in the Administration of Research and Education programs. Duties: Provide leadership in occupational research and development; to work with all other divisional units; to supervise and administer the activities of the Division.
Director of Pilot and Demonstration Programs	Divisional support position (Director II) Qualifications: Background in research design and evaluation, with established research competency. Duties: To plan and direct pilot and demonstration programs; to assist in proposal writing and submission; to establish rapport with granting agencies, (Federal, State, and private) to expedite proposal submission.
Director of Vocational Teacher Education and Certification Research	Divisional support position (Director III) Qualifications: Experience in vocational and technical teacher preparation; ability to work with chairman of departments and deans of colleges and universities. Duties: To coordinate the total vocational teacher education complex of programs throughout the State working especially with the chairman of departments and deans of colleges and universities in New Jersey. To develop and further a master plan for vocational and technical teacher preparation; to provide liaison contact between the State universities and colleges engaged in the teacher preparation; to review certification requirements.

POSITION	SPECIFIC ACTIVITIES AND RESPONSIBILITIES
Director of Vocational Curriculum Research and Instructional Media	Divisional support position (Director III) Qualifications: Competency in curriculum development in vocational and technical education. Duties: To develop and evaluate curriculum materials; to establish liaison with teachers, administrators, industrial and business representatives, and governmental and labor organizations; to serve as a coordinator for curriculum development; to promote research in new instructional media.
Director of Program Evaluation	Divisional support position (Director III) Qualifications: Experience in supervising program development, evaluation and data analysis. Duties: To design and implement evaluative procedures; to maintain statistical data relative to vocational education programs; to project economic trends, labor market trends, manpower needs, and other data for long-range planning.
Director of Vocational Facilities Planning	Divisional support position (Director III) Qualifications: A broad understanding and demonstrated competency in planning vocational facilities. Duties: To establish standards for vocational construction and space allocations; to be responsible for facility planning approvals; to project long-range facility needs; to establish and maintain rapport with architects and the Department Bureau on school planning; to serve as a consultant to local schools on planning needs.

III RESULTS

1. Pilot and Demonstration Projects

During the past eighteen months, 352 action type occupational development projects involving local high schools, vocational-technical schools and several colleges, both public and private, have been put into operation. These projects were encouraged by Division personnel who assisted the various organizations involved.

Criterion standards were developed by analyzing relevant literature, and through group efforts, including conferences and workshops. These criteria were then used to establish the pilot programs designed to provide young people, having special handicaps with marketable skills.

The sum of 2.2 million dollars was used to establish 178 of these pilot and demonstration projects during 1965-66. This money was derived equally from State and Federal funds and aided in providing occupational research and development education for over seven thousand young people, who could not otherwise have received this type of training.

The enthusiasm with which these projects were instituted by the local districts and colleges and the realization of desirable outcomes, became very evident when requests for additional pilot and demonstration projects poured into the Occupational Research and Development Unit. The second year (1966-67) saw the renewal of 164 of the initial 178 projects and the addition of 188 newly conceived proposals. The sum of 4.3 million dollars of equally divided State and Federal monies has been provided for all these special pilot projects this year.

In the 1966-67 school year approximately 15,000 young people are receiving occupational education in these projects, which is uniquely structured to meet their needs. Included among these youth are young people with very definite special needs as shown by the following sample of course titles: Introduction to Vocations (Educables); Office Procedure for the Handicapped; Employment Orientation (Educables); Visual Communications Technology (Deaf); Introduction to Vocations (Neurologically Impaired); Agricultural Training for Educables.

With the cooperation of the participating districts, a committee comprised of specialists from the Division of Vocational Education and resource people from other disciplines developed an assessment guide. The assessment criteria enabled the local district and Division staff members to determine whether the elements which constituted the local program were occupational in nature and were indeed preparing youth for entry into the labor market with a minimum of difficulty. The guide also enabled the districts to recognize the strengths and weaknesses of their programs, thereby hopefully leading to improved instruction, facilities, and desirable effects on youth.

Teams of evaluators included out-of-state consultants and State Department of Education personnel. All concerned were greatly impressed with the results.

An inventory file of all pilot projects including all material gathered is maintained by the Occupational Research and Development Unit. The file contains the initial proposal and review data, funding information, course of study outlines, evaluations and correspondence.

Over 600 developmental projects were received and reviewed by the Unit to ascertain their educational soundness and their need, based upon labor market requirements. Proposals sought to establish pilot programs in seven occupational areas. These were: Agricultural Occupations; Distributive Occupations; Health Occupations; Home Economics Occupations; Industrial Occupations; Office Occupations; Technical Occupations.

Other proposals approved included pilot programs in Introduction to Vocations, Model Business Courses, and Steno-Lab. The latter involving several state and private colleges. Two of the approved proposals sought to develop curricula for Semi-Skill Occupational Education in an Industrial Arts Setting, and an Industrial-Prep Program. The Industrial-Prep Program received substantial aid from training personnel at the Western Electric Company.

Throughout the eighteen months, members of the Research and Development Coordinating Unit have visited those projects which were instituted and have provided guidance, information, and advice.

Two workshops were conducted in 1966 with local school supervisors of Industrial Arts and Home Economics supervisors to discuss the evaluative phases of pilot projects under their supervision.

At the present time, on-site evaluative procedures are being conducted to determine how best to strengthen existing action projects. In addition, a survey is currently underway to pinpoint those projects showing exceptional strengths or deficiencies as well as providing statistical information relative to the use of advisory committees and the types of special needs students served.

2. Curriculum Projects

One of the larger curriculum projects, conducted since November 1, 1965, was Project No. OE-6-85-045, the Federally funded, 4(c), Bayonne High School Curriculum Research Project. The Director of Vocational Curriculum Research served as part-time project director and administered the project with a full-time research associate. The entire staff of the Occupational Research and Development Unit was enlisted for the workshops involved in the project.

The first of a series of one-day conferences on Writing Research Proposals was held in cooperation with the Vocational-Technical Department staff of Rutgers, the State University. Participation was by invitation and included vocational and academic high school administrators, coordinators and teachers, personnel from the State colleges, the State Department of Education, and a representative of the U.S. Office of Education, Dr. Withron McEnge.

As a result of this effort, a number of requests from local districts for consultation were initiated to develop research proposals under Section 4(c) of the Vocational Education Act of 1963. These proposals included such areas as innovative changes in guidance, curriculum, and programmed instruction.

Inter-agency cooperation was effected with the New Jersey Police Training Commission by joint submission to and subsequent approval by the Office of Education of a 4(c) proposal.

In addition, the Juvenile Aid Bureau of Hudson County discussed with members of the Occupational Research and Development Unit a proposal to develop a program for training personnel to deal more effectively with potential juvenile offenders.

One of the early projects initiated as part of the Occupational Research and Development Unit was the appointment of a State Advisory and Coordinating Committee to review and make recommendations to the Assistant Commissioner of Education pertinent to the operation of the Curriculum Laboratory of the Division of Vocational Education. The committee members were selected from area vocational schools, comprehensive high schools, and

from the State Department of Education.

On the basis of the Committee's recommendation, the Summer Curriculum Institute for Vocational Education Teachers was expanded and will include an in-depth examination by the participants of physical facilities and program offerings.

A special committee of medical doctors, hospital administrators, school superintendents, the Director of the Curriculum Laboratory, and the Director of Curriculum and Instructional Media Research have been meeting to explore ways and means of providing programs in the para-medical areas and to suggest areas of training for the medical technologies.

State Curriculum Guides were collected and reviewed. A small group of specialists assisted in revising Guides to up-date and upgrade them. These Guides were returned to schools who had originally submitted them and then after acceptance by the local school and return to the Occupational Research and Development Unit, were submitted to the State Board of Education for approval through the Assistant Commissioner of Education for the Division of Vocational Education.

3. County Coordinators

The State Department of Education approved a request by the Division of Vocational Education, for employing three county coordinators of occupational education, under a pilot project. The Project Director is the Director of Vocational Curriculum and Instructional Media Research. These coordinators working in the field and located in the offices of County Superintendents of schools provided consultative services to local school districts relative to the establishment or upgrading of occupational education programs.

The County Coordinators of Occupational Education, area program Supervisors, and the Occupational Research and Development Unit encouraged team development of curriculum materials using mix techniques to cross lines in vocational areas such as: Distributive Education with Home Economics, Vocational-Agriculture with Distributive Education, etc.

Materials developed are being field tested and evaluation will be conducted next year.

4. Facilities Planning

School administrators, teachers and architects have frequently requested listings of machinery, furniture, and portable equipment required for a variety of educational programs. Such listings were compiled for elementary, junior, and senior high schools, in such instructional areas as industrial arts, distributive education, office and health occupations and trade and industry occupations.

At the request of school administrators, sixteen vocational schools and thirty-eight comprehensive high schools were studied to provide additional data useful in the designing and equipping of new or existing facilities.

In addition to the designing and planning service, the preliminary plans submitted by architects for three elementary industrial arts laboratories, twenty-one junior high schools industrial arts laboratories, seventy-six senior high schools industrial arts laboratories, twelve home economics rooms and two-hundred and twelve vocational-technical shops were reviewed.

The increased demand for financial assistance in building new vocational-technical facilities has prompted the Division of Vocational Education to develop a six-year, construction aide reimbursement program. The requests for the six-year period (1965-1970) amounted to $12,966,323.39 with a current income of $1,391,320.30 per year for construction purposes. The Occupational Research and Development Unit analyzed the requests and developed several proposals for fiscal financing on a long-range basis. To provide an additional service to school architects and administrators, a facilities research information center was set up to assist those interested in furniture, machinery and portable equipment common to the various vocational areas.

5. Master Planning

One hundred participants, representing a broad spectrum within the total education community of New Jersey, met for two and a half days in November to initiate the first stages in the development of a master plan in vocational-technical education in New Jersey. Under the leadership of Dr. Robert M. Worthington, Assistant Commissioner of Education, the participants identified nine areas for in-depth study during the next year. Study committees are being formed whose membership will consist of a broad representation from many sectors, both within and outside of vocational education.

A significant number of participants voiced the value of increasing the responsibility for research, development, and the dissemination of information at the State level. The Director of Program Planning will direct master planning activities.

6. Inter-State Cooperation

New Jersey is one of three pilot states cooperating with the Ohio State University Center for Research in Vocational-Technical Education in developing and testing a model to evaluate state programs of vocational education. The Director of Program Evaluation continues to attend work sessions at the Center, where representatives from each of the pilot states contribute to the development of the model. The entire Occupational Research and Development Unit will eventually contribute their energies toward implementing the evaluative procedures.

The Occupational Research and Development Unit is currently collecting data relative to curricula offerings in vocational-technical education from school administrators throughout the State. Results of this survey will be transmitted to the Center for Studies in Vocational and Technical Education at the University of Wisconsin. A national directory of vocational-technical curricula will be published by that Center.

In November, 1966, data were collected on New Jersey's administration of vocational-technical education by a visiting research team from the University of California (Berkeley) national project on Research and Development in State Administration of Vocational-Technical Education. The Unit arranged for facilities and invitations to those who participated in the two-day sessions.

7. Information Center

The Division of Vocational Education Information Center, which was expanded and placed under the administration of the Unit has gathered and forwarded materials to ERIC. A graduate student research assistant was employed to help rearrange and recatalog existing materials. Until additional staff are employed, all members of the Unit are working cooperatively to expand the scope of service which can be rendered by the Information Center.

The Branch Research Assistant aided twelve graduate students from three universities in gathering materials for research and course work at the Master's degree level.

8. Special Need Programs

Research and development personnel have provided leadership and direction in stimulating specialized programs of occupational education for special need students.

At the request of Superintendents of schools in Essex and Camden counties, advice and direction was supplied by Unit members to assist those areas in developing innovative pilot programs of occupational education for severly physically and mentally handicapped high school students. Coordination with the New Jersey Rehabilitation Commission was established.

The Unit staff also assisted in the present development and review of plans for a new center for the preparation of teachers of occupational education at the Jersey City State College. Emphasis in the emerging program will be placed on meeting the needs of disadvantaged youth.

9. County Surveys

In 1965 the State Department of Education received a formal request from the Board of Chosen Freeholders of Mercer County to conduct a survey related to the needs for occupational education. In compliance with this request, the survey was initiated on September 14, 1965 by the Research and Development Unit. A steering committee was established whose purpose it was to identify relevant survey questions, inform the public about the proposed survey, and discuss purposes and problems with Unit personnel.

The steering committee and the staff of the Research and Development Unit drew up instruments to determine student occupational interests, parents' interests regarding occupational education and their children's future occupational choice, and employers' attitudes toward employment training and education.

The results of the survey are being compiled and will be ready for dissemination in January, 1967.

10. Submission of 4(c) Proposals

The Research and Development Unit reviewed many proposals submitted for evaluation. In addition to the Police Training Commission proposal already mentioned, the following proposals were forwarded through the Unit to the Office of Education, Division of Adult and Vocational Research:

Applicant	Project Title
McNeice, William C.	Establishment and Initial Operation of a Vocational Facilities Planning Laboratory to Develop Vocational Facility Planning Guides Concerning Twenty Clusters of Occupations.
Tuckman, Bruce W.	A Study of the Effectiveness of Directive Versus Non-Directive Vocational Teachers as a Function of Student Characteristics and Course Format.
Tuckman, Bruce W.	The Development and Testing of an Evaluation Model for Vocational Pilot Programs.

11. Other Activities

A Governor's Symposium on Vocational Education was held involving participants from both the private and public sectors within industry, government, and education. Members of the Research and Development Unit participated in the committee responsible for the presentations offered by the Division of Vocational Education.

The Research and Development Unit staff participated in programming the New Jersey Vocational and Industrial Arts Association Convention in April, 1966. Informational programs by the Research and Development Unit staff on research services available were presented to the sectional meetings of the apprentice coordinators and home economics supervisors. Staff members also sponsored an open meeting for those interested in research.

Divisional in-service seminars on data processing and computer technology were sponsored by the Unit.

Statistical and research consultation was offered both within the Division of Vocational Education and statewide to a variety of agencies.

All staff members participated in professional meetings and seminars and workshops - including those sponsored by the Office of Education, Division of Adult and Vocational Research.

IV DISCUSSION

In terms of functioning the Unit staff directed most of their efforts toward implementing new and innovative programs in local school districts and other assignments of a developmental nature.

Research activities were given a secondary priority, although equally important role, during the grant period primarily because of the urgent need for providing occupational education opportunities to New Jersey youth.

Since September, 1966 and with the appointment of a Unit Director, a greater degree of internal organization was effected. Concomitant with these developments was a greater emphasis placed on research and dissemination activities.

An analysis of the results achieved during the period of the grant indicated that the Research and Development Unit was a markedly successful operation in terms of its mandated functions.

V CONCLUSIONS

The Occupational Research and Development Unit utilized a variety of research and development techniques to serve the needs of local educators and others having problems relative to vocational education including teacher education and certification, program evaluation, pilot and demonstration programs, planning of facilities, equipment selection and curriculum development. Functional activities included stimulating and coordinating efforts; participating in the study and solution of problems; and disseminating of information significant to occupational education. Specialists serving in the Occupational Research and Development Unit provided the necessary leadership to implement these activities.

VI SUMMARY

The New Jersey Occupational Research and Development Unit was approved and funded, effective June 1, 1965, under the provisions of the Vocational Education Act of 1963, P.L. 88-210, Section 4(c). The initial funding was for an operational period of eighteen months on a grant basis.

The Occupational Research and Development Unit is located in the Division of Vocational Education, the State Department of Education in Trenton, New Jersey. The operational responsibility is under the direction of Dr. Robert M. Worthington, Assistant Commissioner of Education for Vocational Education.

Increased and improved educational services have become available through the initiation of the Occupational Research and Development Unit. Some of the major agencies coordinating with this Unit are the Bureau of School Building Services, the New Jersey State Employment Service, the Bureau of Teacher Certification, the private and state colleges and universities in New Jersey, the Department of Labor, local school districts, and the Vocational Curriculum Laboratory at Rutgers, the State University.

Whenever possible, the Occupational Research and Development Unit has endeavored to determine its priority of activities through consultations with educational and community leaders as well as the State Advisory Committee to the Division of Vocational Education of the State Department of Education.